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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Paul A. Furze

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EXAMINER

GRAY, BRANDON RAMON

ART UNIT

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3714

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/797,797	Applicant(s) FURZE ET AL.	
	Examiner BRANDON GRAY	Art Unit 3714	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03/10/04.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4, 6-11, 13-19, 21-25, 27-42 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6-11, 13-19, 21-25, 27-42 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03/10/04 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>03/10/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

Applicant's election without traverse of species I-A, II-A, III-A, IV-A in the reply filed on 07/22/2009 is acknowledged. Claims 5, 12, 20 and 26 are canceled. Claims 1-4, 6-11, 15-19, 21-25 and 27-42 are pending.

Claim Objections

Claim 11 is objected to because of the following informalities: Applicant recites "helps to guide" the claim should recite "guides". Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3, 5, 7-10, 12-18, 20-22 and 24-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Pat Number 5,632,205 to Gordon in view US Pat Number 7,283,657 to Carlson.

Regarding claims 1 and 27, Gordon discloses a method of orienting a spherical object, comprising: acquiring an image of a spherical object at an imaging station (see abstract);

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analyzing the image with a first computer to determine an orientation analysis (col 4 lines 40-60, col 5 lines 49-55); and orienting the object to a predetermined orientation according to the orientation analysis (col 5, lines 25-31);

Gordon is silent on transferring the object from the imaging station to orienting stations using a transfer mechanism; and

wherein the orienting stations comprise first, second, and third stations each rotating the object about a single axis);

the first, second, and third stations collectively orienting the object by rotation about axes that are alternately perpendicular.

However, Carlson teaches transferring the object from the imaging station to orienting stations using a transfer mechanism (fig 7, col 13, lines 29-40)

wherein the orienting stations comprise first, second, and third stations each rotating the object about a single axis(fig 7, col 11, lines 20-35);

the first, second, and third stations collectively orienting the object by rotation about axes that are alternately perpendicular (col 9 lines 10-20).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Gordon with Carlson imaging station's for the benefit of having higher operational rates.

Regarding claim 2, Gordon discloses wherein the object is a golf ball (col 2 lines 1-5).

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Regarding claims 3 and 28, Gordon is silent on wherein the transfer mechanism comprises a walking beam or a rotary indexer.

However, Carlson teaches the transfer mechanism comprises a walking beam and a rotary indexer (fig 9a, 92, col 12, lines 1-10).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Gordon with Carlson's transfer mechanism for the benefit of having multiple processes occurring at the same time.

Regarding claim 7, Gordon is silent on the transfer mechanism has a gripping member to hold the object.

However, Carlson teaches the transfer mechanism has a gripping member to hold the object (col 13, lines 29-35).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Gordon with Carlson's gripping member for the benefit of better securing the object.

Regarding claims 8 and 29, Gordon is silent on the transfer mechanism comprising a compliant object carrier that is movable translationally and substantially immovable rotationally.

However, Carlson teaches the transfer mechanism comprises a compliant object carrier that is movable translationally and substantially immovable rotationally (col 11, lines 20-30).

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Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Gordon with Carlson's object carrier for the benefit of speeding up the process of moving the object.

Regarding claim 9, Gordon is silent on the compliant object carrier comprising a compliant bellows coupling

However, Carlson teaches the compliant object carrier comprises a compliant bellows coupling (fig 8, 63, col 12, lines 1-10).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Gordon with Carlson's coupling for the benefit of providing a secure structure for the process.

Regarding claims 10 and 30, Gordon discloses a holder cup that has an internal cup diameter approximately equal to an outside diameter of the object, and the object helps to guide the object carrier to the rotation cup (col 3, lines 20-45, before rotation begins it is considered a holder cup).

Regarding claim 13, Gordon discloses wherein a driven cup clamps onto, and rotates, the object after the transfer mechanism indexes the object (col 3, lines 30-45).

Regarding claims 14 and 31, Gordon is silent regarding at least one of the orienting stations is at least partially mounted onto the transfer mechanism.

However, Carlson teaches at least one of the orienting stations is at least partially mounted onto the transfer.

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Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Gordon with Carlson's orienting station for the benefit of reducing the amount parts needed for the process.

Regarding claims 15 and 32, Gordon discloses a spindle (fig 3 130, col 3, lines 30-45), but is silent on second station being mounted onto the transfer mechanism.

However Carlson teaches a second station mounted onto the transfer mechanism (col 11 lines 20-35).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Gordon with Carlson's transfer mechanism for the benefit of speeding up the transfer process.

Regarding claim 16, Gordon discloses a motor that rotates the spindle to rotate the object (col 3, lines 35-45), but is silent regarding it mounted on the transfer mechanism.

However, Carlson teaches the motor mounted on the transfer mechanism (col 11, lines 20-35).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Gordon with Carlson's transfer mechanism for the benefit of speeding up the transfer process.

Regarding claim 17, Gordon discloses acquiring an image of the object as the motor rotates the object (fig 4, col 5, lines 5-30).

Regarding claim 18, Gordon discloses driving the spindle with a friction wheel to rotate the object (fig 3 lines col 3, lines 35-46).

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Regarding claim 21, Gordon discloses sliding the spindle into an engaged position wherein a motor is coupled to the spindle as the spindle slides into the engaged position (col 2, lines 60-67, col 3 lines 1-5).

Regarding claim 22, Gordon discloses that the spindle engages the motor through a blade and slot mechanism while indexes the object (fig 3, col 20-45), but is silent on transfer mechanism indexing the object.

However Carlson teaches a transfer mechanism (col 11, lines 20-35).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Gordon with Carlson's transfer mechanism for the benefit of speeding up the transfer process.

Regarding claim 24, it is rejected under the same basis as claim 23.

Regarding claim 25, Gordon discloses two of the three alternate perpendicular axes are vertical (fig 1a).

Regarding claim 33, Gordon discloses wherein the imaging station is an image acquisition and object orienting station that comprises a gimbaled mechanism that rotates the object about three perpendicular axes without a transfer from one station to another station between the rotations (fig 1a, 1b, 1c, 1d, col 5, lines 49-60)).

Regarding claim 34, Gordon discloses the object is transferred to an orienting station that has a gimbaled mechanism that rotates the object about three perpendicular axes without a transfer from one station to another station

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between the rotations (fig 1a, 1b, 1c, 1d, col 5, lines 49-60), but is silent on a transfer mechanism.

However, Carlson teaches a transfer mechanism (col 11, lines 20-35).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Gordon with Carlson's transfer mechanism for the benefit of speeding up the transfer process.

Regarding claim 35, Gordon is silent regarding an automated transfer mechanism transfers the object to the orienting station.

However, Carlson teaches an automated transfer mechanism transfers the object to the orienting station (col 11, lines 20-45).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Gordon with Carlson's automated transfer mechanism for the benefit of making the whole process machine oriented.

Regarding claim 36, Gordon discloses an orienter for a spherical object, comprising: an imaging station having an image detector (see abstract);

a computer that can determine an image analysis (col 5, lines 49-65);

Gordon is silent on three orienting stations that operably receive the analysis and can rotate the object about perpendicular axes; and

a transfer mechanism having a compliant object carrier that is movable translationally and substantially immovable rotationally;

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wherein the detector operably images an object, the computer operably determines the image analysis, and the three stations operate to orient the object according to the analysis.

However, Carlson teaches three orienting stations that operably receive the analysis and can rotate the object about perpendicular axes (col 9, lines 10-25); and

a transfer mechanism having a compliant object carrier that is movable translationally and substantially immovable rotationally (col 11, lines 20-50);

wherein the detector operably images an object, the computer operably determines the image analysis, and the three stations operate to orient the object according to the analysis (see abstract).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Gordon with Carlson's orienting stations for the benefit of speeding up the time it takes to complete the imaging process.

Regarding claim 37, the orienter is rejected under the same basis as claim 2.

Regarding claim 38, the orienter is rejected under the same basis as claim 3.

Regarding claim 39, the orienter is rejected under the same basis as claim 10.

Regarding claim 40, the orienter is rejected under the same basis as claim 14.

Regarding claim 41, the orienter is rejected under the same basis as claim 15.

Regarding claim 42, Gordon is silent on the orienting stations comprises a plurality of indexing wheels.

However, Carlson teaches orienting stations comprises a plurality of indexing wheels. (fig 7, 66, 110; col 12, lines 14-30).

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Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Gordon with Carlson's indexing wheels for the benefit of simplifying the indexing process.

Claims 4, 6, 11 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Pat Number 5,632,205 to Gordon in view US Pat Number 7,283,657 to Carlson and in further view US Pub Number 2001/0012389 to Welchman.

Regarding claim 4, Gordon in view of Carlson is silent on the rotary indexer is a cam-driven mechanical indexer.

However, Welchman teaches wherein the rotary indexer is a cam-driven mechanical indexer (par 0056).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Gordon with Welchman's cam driven rotary indexer for the benefit of making the process more efficient.

Regarding claim 6, Gordon in view of Carlson is silent on wherein the transfer mechanism has a vacuum cup to hold the object.

However, Welchman teaches the transfer mechanism that has a vacuum cup to hold the object (par 0071).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Gordon with Welchman's vacuum cup for the benefit of better securing the object.

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Regarding claim 11, Gordon in view of Carlson is silent on a shot pin helps to guide the object carrier into alignment with a holder cup.

However, Welchman teaches a shot pin helps to guide the object carrier into alignment with a holder cup (par 0055).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Gordon in view of Carlson with Welchman's shot pin for the benefit helping the alignment be more efficient.

Regarding claim 23, Gordon is silent on alternating a flow of data from the imaging station to the first computer with a flow of data from the imaging station to a second computer.

However, Welchman teaches comprising alternating a flow of data from the imaging station to the first computer with a flow of data from the imaging station to a second computer (par 0037, 0040).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Gordon with Welchman's imaging stations for the benefit of having two processing stations instead of one to increase the amount of imaging that can be done.

Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Pat Number 5,632,205 to Gordon in view of US Pat Number 7,283,657 to Carlson and in further view of US Pat 3,778,067 to Gentilumo.

Regarding claim 19, Gordon discloses the spindle to rotary the object (col 3, lines 20-45), but is silent on it being on a magnetically coupled motor.

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However, Gentiluomo teaches a magnetically coupled motor (col 12, lines 21-30). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Gordon in view of Carlson with Gentiluomo's magnetically coupled motor for the benefit of improving the rotation by causing less friction.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: U.S Pat 5,611,723 to Mitoma, U.S Pat 5,859,923 to Petry, U.S Pub 2003/0031359 to Miki, and U.S Pub 2001/0043757 to Asakura.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BRANDON GRAY whose telephone number is (571)270-7465. The examiner can normally be reached on Mon- Fri 7am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dmitry Suhol can be reached on (571) 272-4430. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/B. G./

Sept 30, 2009

Examiner, Art Unit 3714

/JAMES S. MCCLELLAN/

Primary Examiner, Art Unit 3714